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The time period for reply, if any, is set in the attached communication.

UNITED STATES PATENT AND TRADEMARK OFFICE

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BEFORE THE BOARD OF PATENT APPEALS  
AND INTERFERENCES

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*Ex parte* THOMAS D. KENNEDY,  
MARVIN R. HAVENS,  
DREW V. SPEER,  
CHARLES R. BARMORE,  
R. KARINA ESPINEL, and  
JEFFREY A. THOMAS

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Appeal 2009-000896  
Application 10/689,146  
Technology Center 1700

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Decided: February 25, 2010

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Before ADRIENE LEPIANE HANLON, PETER F. KRATZ, and  
MARK NAGUMO, *Administrative Patent Judges*.

KRATZ, *Administrative Patent Judge*.

DECISION ON APPEAL

This is a decision on an appeal under 35 U.S.C. § 134 from the Examiner's final rejection of claims 24, 25, 27, and 29-36. We have jurisdiction pursuant to 35 U.S.C. § 6.

Appellants' claimed invention is directed to a patch including an oxygen barrier layer, an adhesive-containing layer adhered to the barrier layer, and an oxygen indicator disposed on the adhesive-containing layer in a manner such that the indicator is non-coextensive with the adhesive-containing layer, and/or, such that the patch can be adhered to a packaging material via the adhesive, and/or with the proviso that a pressure-sensitive adhesive is part of the adhesive-containing layer. Thus, the patch is, in essence, a multi-layered product having a barrier layer, an adhesive layer, and an oxygen indicator.

Claim 33 is illustrative and reproduced below:

33. A patch comprising:

a) a first layer comprising an oxygen barrier having an oxygen transmission rate of no more than  $100 \text{ cc/m}^2/24\text{hr}$  at  $25^\circ\text{C}$ , 0% RH, 1 atm (ASTM D 3985);

b) a second layer comprising an adhesive, the adhesive adhered to the first layer; and

c) an oxygen indicator, disposed on the second layer, comprising a luminescent compound;

wherein the oxygen indicator is disposed as a printed image on the second layer; and

wherein the patch is adapted to be adhered, by means of the adhesive, to a packaging material.

The Examiner relies on the following prior art reference as evidence in rejecting the appealed claims:

Miyasaka	4,820,606	Apr. 11, 1989
Khalil	5,043,286	Aug. 27, 1991

Inoue	5,358,876	Oct. 25, 1994
Speer	5,529,833	Jun. 25, 1996
Nagai	5,912,090	Jun. 15, 1999
Harvey	6,590,031 B2	Jul. 8, 2003

Merriam-Webster Online, definition of "print" (verb)  
(<http://m-w.com/cgi-bin/dictionary>.)

The Examiner maintains the following grounds of rejection:  
(I) claims 29-31 and 33-35 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over Speer in view of Inoue; (II) claims 32-36 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over Speer in view of Inoue and Khalil; (III) claims 24 and 25 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over Speer in view of Inoue and Harvey; and (IV) claim 27 stands rejected under 35 U.S.C. § 103(a) as being unpatentable over Speer in view of Inoue, Harvey, and Khalil.

We affirm the stated rejections for the reasons set forth by the Examiner in the Answer, as explained herein. At the outset, we note that Appellants furnish separate arguments only for independent claims 29 and 33 with respect to rejection I and argue claims 24 and 25 together as a group with respect to rejection III. Consequently, we select claim 29 as a representative claim for claims 29-31 and claim 33 as a representative claim for claims 33-35 with respect to rejection I. Also, we select claim 24 as the representative claim on which we focus with respect to rejection III. Moreover, Appellants limit their argument with regard to the dependent claims subject to rejections II and IV to the contentions presented for the respective independent claims, as presented against rejections I and III.

Thus, rejections II and IV are affirmed for the same reasons as rejections I and III, on this record.

#### PRINCIPAL ISSUES/CONCLUSIONS

Have Appellants identified reversible error in the Examiner's determination that Inoue taken with Speer teach or suggest to one of ordinary skill in the art subject matter corresponding to Appellants' patch including an oxygen indicator located on an adhesive-containing layer portion of the patch, as here-claimed, wherein the adhesive-containing layer is attached to an oxygen barrier substrate layer portion of the patch in a manner allowing the patch to be employed as part of a package material and/or in a manner providing an indicator that is not co-extensive with the adhesive-containing layer?

Have Appellants identified reversible error in the Examiner's determination that the combined teachings of Inoue taken with Speer and Harvey teach or suggest to one of ordinary skill in the art a product corresponding to Appellants' patch including an oxygen indicator located on a pressure sensitive adhesive-containing layer portion of the patch, as here-claimed, wherein the adhesive-containing layer is adhered to an oxygen barrier substrate layer portion of the patch?

We answer these questions in the negative.

#### FINDINGS OF FACT

The Specification makes plain that the term "patch" includes multilayer films (Spec. 11, ll. 8-15).

Speer discloses a multilayer film structure including one or more oxygen barrier layers and one or more adhesive layers, and an oxygen scavenger useful for packaging oxygen-sensitive products (col. 3, ll. 20-55; col. 9, ll. 11-49; col. 11, ll. 4-11 and 50-62; and col. 12, ll. 31-35).

The Examiner has found that Speer discloses a packaging barrier layer having oxygen transmission properties of no more than 25 cc oxygen/square meter/24hr. [corresponding to Appellants' claimed barrier layer] and which layer is adjacent or attached to an adhesive layer (FOA<sup>1</sup> 3; Ans. 3-4 and 7). Appellants do not dispute these findings of the Examiner (Br. 10-15).

Inoue discloses an oxygen indicator that can include thiazine dyestuff and the indicator is disclosed as being printable on a film, such as a film used as part of a package, which package can include oxygen scavengers (col. 1, ll. 56-64; col. 3, ll. 35-41, col. 4, ll. 9-25; and Examples 95 and 97-99).

The Examiner has found, without dispute by Appellants, that thiazine is a luminescent compound (FOA 3, 6, and 7; Ans. 4 and 7; Br. 10-15).

The Examiner has found that Harvey discloses or suggests the use of pressure sensitive adhesive materials, including maleic anhydride, for coating on polymeric films in forming labels and marking films (FOA 4; Ans. 5; Harvey, col. 4, l. 61 – col. 4, l. 3 and col. 8, ll.36-49 and 55-59). Appellants do not dispute these determinations by the Examiner (Br. 10-15).

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<sup>1</sup> Final Office Action.

## DISCUSSION

### Rejection I.

Concerning representative claim 29, Appellants argue that the Examiner's combination of Speer and Inoue blends the teachings of the two references and "effectively creates a hybrid 'reference' that is a combination of the two references, rather than evaluating the teachings of each reference" (Br. 13). In this regard, Appellants conclusively assert that the Examiner's reasoning "ignores the plain teachings of Inoue . . ." (*id.*).

Appellants, however, do not persuasively explain how Inoue's teachings are being ignored in the rejection predicated by the Examiner. For example, the Examiner acknowledges that Speer does not expressly disclose providing an oxygen indicator (luminescent compound) in the second adhesive-containing layer of the multi-layer package thereof (Ans. 7). The Examiner relies on Inoue's disclosed use of an oxygen indicator (luminescent dyestuff) that is printed on a package film and the Examiner's determination that one of ordinary skill in the art would have been led to print the oxygen indicator of Inoue on an adhesive layer of the package material of Speer so as to employ the indicator for determining the ingress amount of oxygen that permeates through the barrier layer of Speer (Ans. 8). Also, the Examiner furnishes a reasonable explanation as to why the indicator taught by Inoue would have been printed in a non-contiguously extending manner on the adhesive-containing layer of Speer for reasons of function and economics

(FOA 7-8; Ans. 8). This reasoning supplied by the Examiner has not been persuasively challenged by Appellants (Br. 10-15).

In this regard, it is well settled that non-obviousness cannot be established by attacking references individually where the rejection is based upon the teachings of a combination of references. *In re Merck*, 800 F.2d 1091, 1097 (Fed. Cir. 1986); *In re Keller*, 642 F.2d 413, 425 (CCPA 1981). Rather, the test for obviousness is what the *combined* teachings of the references would suggest to those of ordinary skill in the art. *In re Young*, 927 F.2d 588, 591 (Fed. Cir. 1991); *Keller*, 642 F.2d at 425. Thus, whether or not an individual reference teaches a specific part of a claimed invention, as seemingly focused on by Appellants, is not dispositive of the question of obviousness. Consequently, we are not persuaded by the arguments presented by Appellants with respect to representative claim 29.

Similarly, we are not persuaded of any harmful error in the Examiner's rejection of representative claim 33 by the contentions with respect to individual references, as if employed in isolation, and the bald assertion that the Examiner's Office action "confuses and intermixes two references" (Br. 14). Appellants incorrectly focus on only the embodiments of Inoue wherein the indicator is intended to be inserted in a package (Br. 15; Inoue, col. 4, ll. 20-23). Once again, Appellants leave out the additional relevant teachings of Speer and reasoning as applied by the Examiner, in arguing that Inoue does not disclose a patch and that "[n]othing in the reference has been identified that suggests adapting their oxygen indicator to be adhered to a packaging material via an



adhesive” (Br. 15). In this regard and as explained by the Examiner, Inoue teaches “an embodiment where the oxygen indicator is printed on a package bag or container at col. 4, lines 14-19” (Ans. 15-16). Hence, Inoue et al. is not limited to an “oxygen indicator [that] is only printed on a substrate where the substrate is ‘inserted *in* a bag’,” as Appellants seemingly argue (Ans. 16; Br. 15).

In particular, the Examiner explains how Inoue teaches that the indicator may be printed on a packaging film (Ans. 8-9, and 16). In this regard, we note that Examples 97-99 of Inoue teach an oxygen sensor can be adhered to a bag (film). Appellants do not explain how the broadly called for “patch” term requires a structure that differs from that taught or suggested by Inoue and how the called for “adapted to” language of claim 33 requires structure that is not suggested by the combination of Speer and Inoue, wherein the indicator of Inoue is applied to an adhesive layer of Speer for adherence to the multi-layer film thereof.<sup>2</sup> On this record, we are not persuaded of reversible error in the Examiner’s obviousness rejection of representative claim 33.

## Rejection II

Appellants rely on the arguments presented for claims 29 and 33 for the patentability of dependent claims 32 and 36, respectively. As we found those arguments unpersuasive, it follows that we shall also sustain

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<sup>2</sup> To the extent the Examiner asserts that Inoue does not explicitly disclose a patch (Ans. 15), it appears that the Examiner may have been referring to a patch with all the particulars as recited in claim 33. In this regard, we need not address that point further as the Examiner has taken the position that the combination of Inoue and Speer teach a patch (Ans. 9).

the Examiner's obviousness rejection of claims 32 and 36 over Speer, Inoue, and Khalil.

### Rejection III

Representative claim 24 requires that the adhesive in the second layer of the patch is a pressure-sensitive adhesive. The Examiner relies on Harvey in addition to Speer and Inoue, as discussed above, for suggesting that a pressure sensitive type of adhesive would have been obvious to employ in Speer as such is a well known type of adhesive material used in marking films and in labels (FOA 4; Ans. 5). Once again, Appellants appear to misconstrue the Examiner's rejection, which is based on the combined teachings of the applied references, in arguing that the binder of Inoue is not a pressure sensitive adhesive and that maleic anhydride is not maleic anhydride modified polymer adhesive (Br. 11-12). As for the argued insufficient motivation to employ the maleic anhydride (pressure sensitive) adhesive of Harvey in the adhesive layer of Speer for attaching the indicator of Inoue thereto, we note that Appellants do not articulate why the rationale furnished by the Examiner (maleic anhydride pressure sensitive adhesive is well-known for use in labels and marking films) is inadequate (Ans. 5). *See KSR Int'l. Co. v. Teleflex Inc.*, 550 U.S. 398, 418 (2007) (In making an obviousness determination one "can take account of the inferences and creative steps that a person of ordinary skill in the art would employ"). In this regard, we note that Appellants acknowledge that their disclosed indicator patch is, in essence a label containing an indicator that, when

present, can determine oxygen scavenging activity (no oxygen transmission accumulation) (Br. 12).

Consequently, we are not persuaded of reversible error in the Examiner's obviousness rejection of representative claim 24, on this record.

#### Rejection IV

Appellants rely on the arguments made against the Examiner's rejection of independent claim 24 in urging the patentability of dependent claim 27. Because we determined that these arguments are unpersuasive, it follows that we shall also sustain the Examiner's obviousness rejection of claim 27 over Speer, Inoue, Harvey, and Khalil.

#### ORDER

The Examiner's decision to reject claims 29-31 and 33-35 under 35 U.S.C. § 103(a) as being unpatentable over Speer in view of Inoue; claims 32-36 under 35 U.S.C. § 103(a) as being unpatentable over Speer in view of Inoue and Khalil; claims 24 and 25 under 35 U.S.C. § 103(a) as being unpatentable over Speer in view of Inoue and Harvey; and claim 27 under 35 U.S.C. § 103(a) as being unpatentable over Speer in view of Inoue, Harvey, and Khalil is affirmed.

No time period for taking any subsequent action in connection with this appeal may be extended under 37 C.F.R. § 1.136(a).

**AFFIRMED**

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Appeal 2009-000896  
Application 10/689,146

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